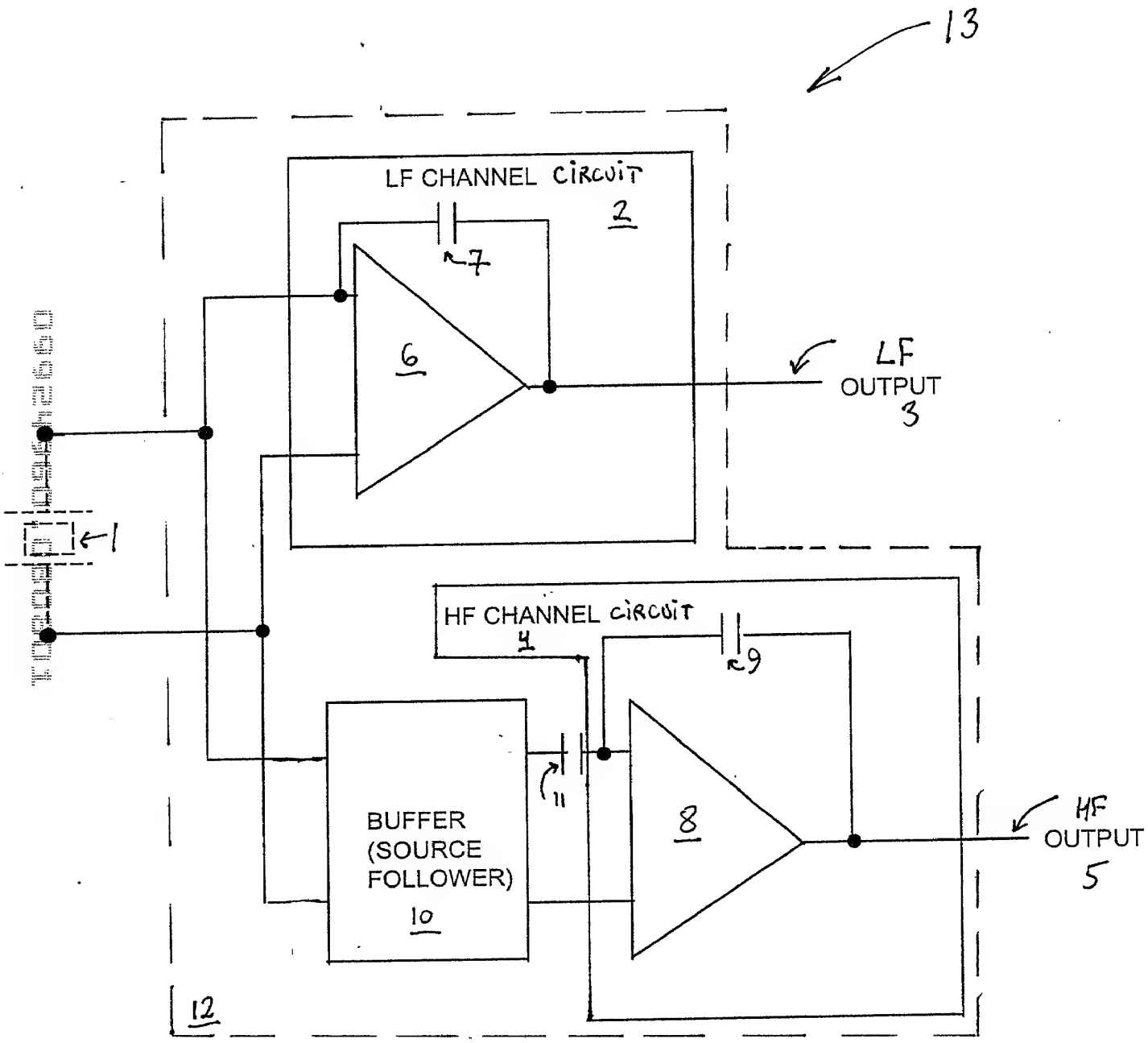
13
LF CHANNEL CIRCUIT
2
7
6
LF
OUTPUT
3
1
HF CHANNEL CIRCUIT
4
9
BUFFER
(SOURCE
FOLLOWER)
10
11
8
HF
OUTPUT
5
12

FIGURE 1

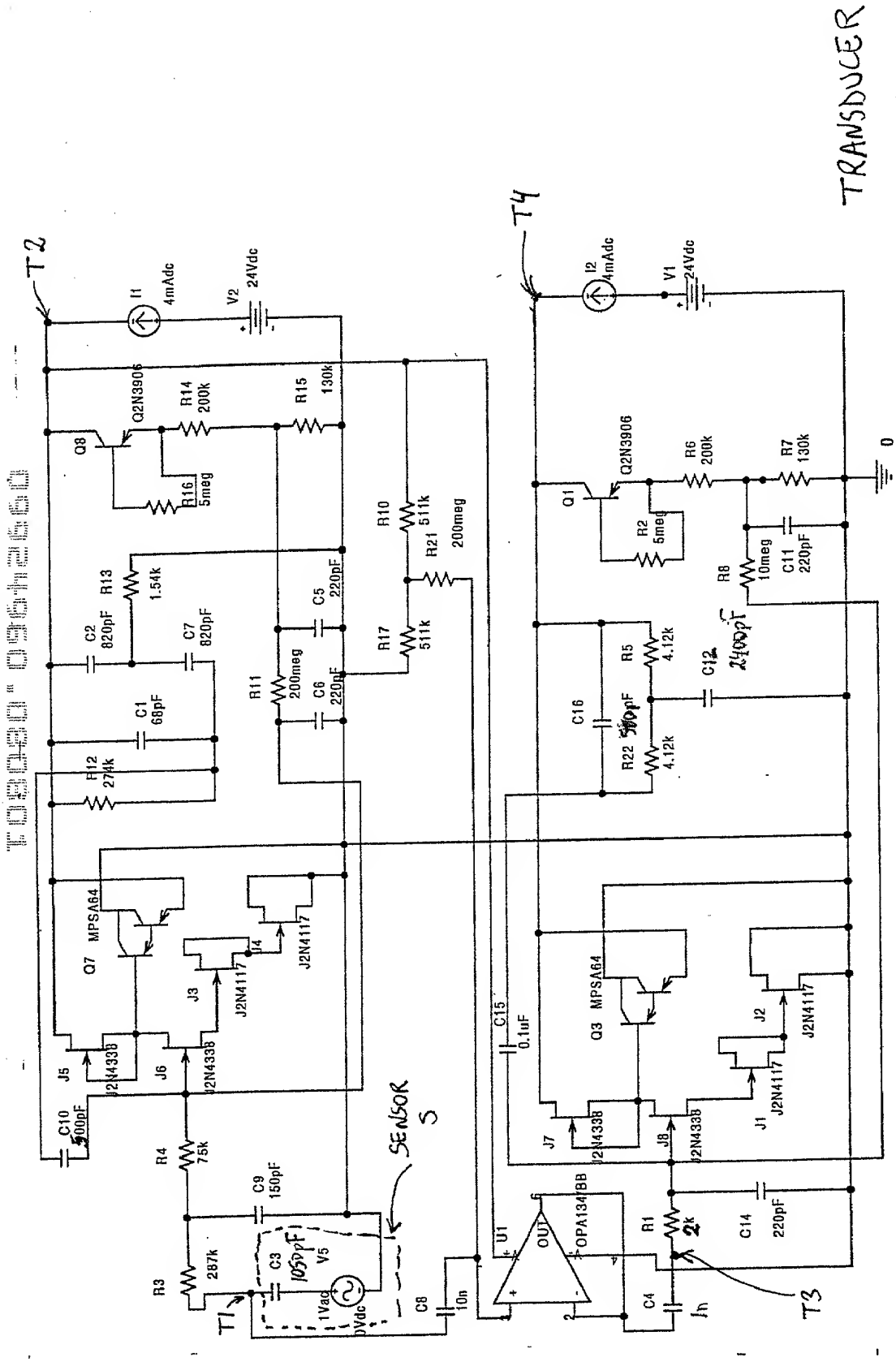
T2
T4
TRANSDUCER
13
SENSOR
5
T1
T3
I1
4mAdc
V2
24Vdc
I2
4mAdc
V1
24Vdc
Q2N3906
Q8
Q1
R14 200k
R15 130k
R16 5meg
R2 5meg
R6 200k
R7 130k
R8 10meg
C11 220pF
R10
R21 511k
200meg
R13 1.54k
C2 820pF
C7 820pF
C5 220pF
C6 220pF
R11 200meg
R17 511k
C1 68pF
R12 27kk
C12
R5 4.12k
C16
R22 4.12k
Q7 MPSA64
Q3 MPSA64
J3 J2N4117
J4 J2N4117
J2 J2N4117
J1 J2N4117
J5 J2N4338
J6 J2N4338
J7 J2N4338
J8 J2N4338
C15 0.1uF
C10 100pF
R4 75k
C9 150pF
R3 287k
C3 105pF
V5
1Vac
0Vdc
C8 10n
U1
OPA134BB
R1 2k
C14 220pF
C4
0

Fig. 2

$V_{in} = 1V$

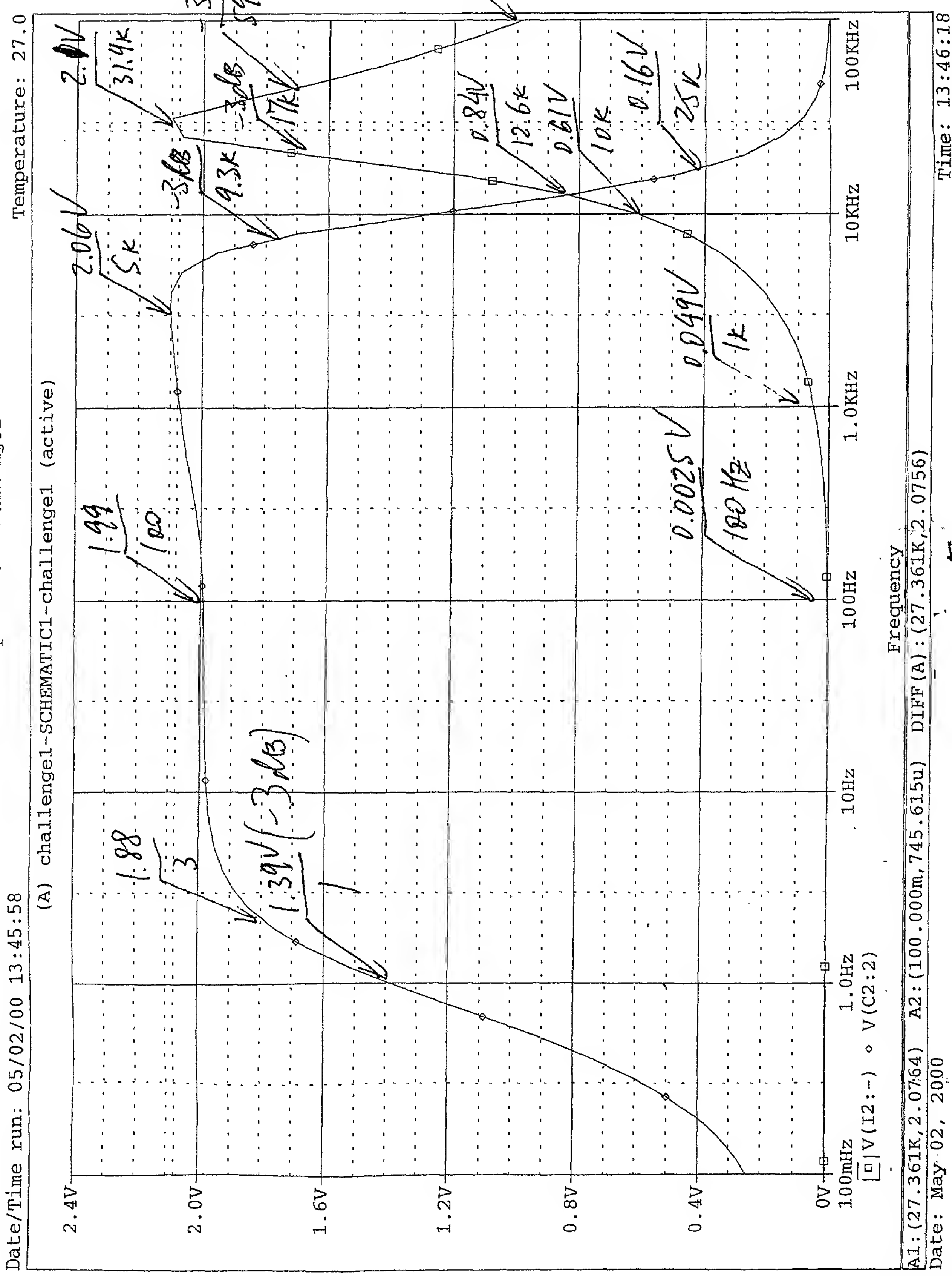
Date/Time run: 05/02/00 13:45:58
** circuit file for profile: challenge1
Temperature: 27.0
(A) challenge1-SCHEMATIC1-challenge1 (active)
2.4V
2.0V
1.6V
1.2V
0.8V
0.4V
0V
100mHz
1.0Hz
10Hz
100Hz
1.0KHz
10KHz
100KHz
□ V(I2:-) ◇ V(C2:2)
Frequency
A1:(27.361K,2.0764) A2:(100.000m,745.615u) DIFF(A):(27.361K,2.0756)
Date: May 02, 2000
Time: 13:46:18

FIG. 3

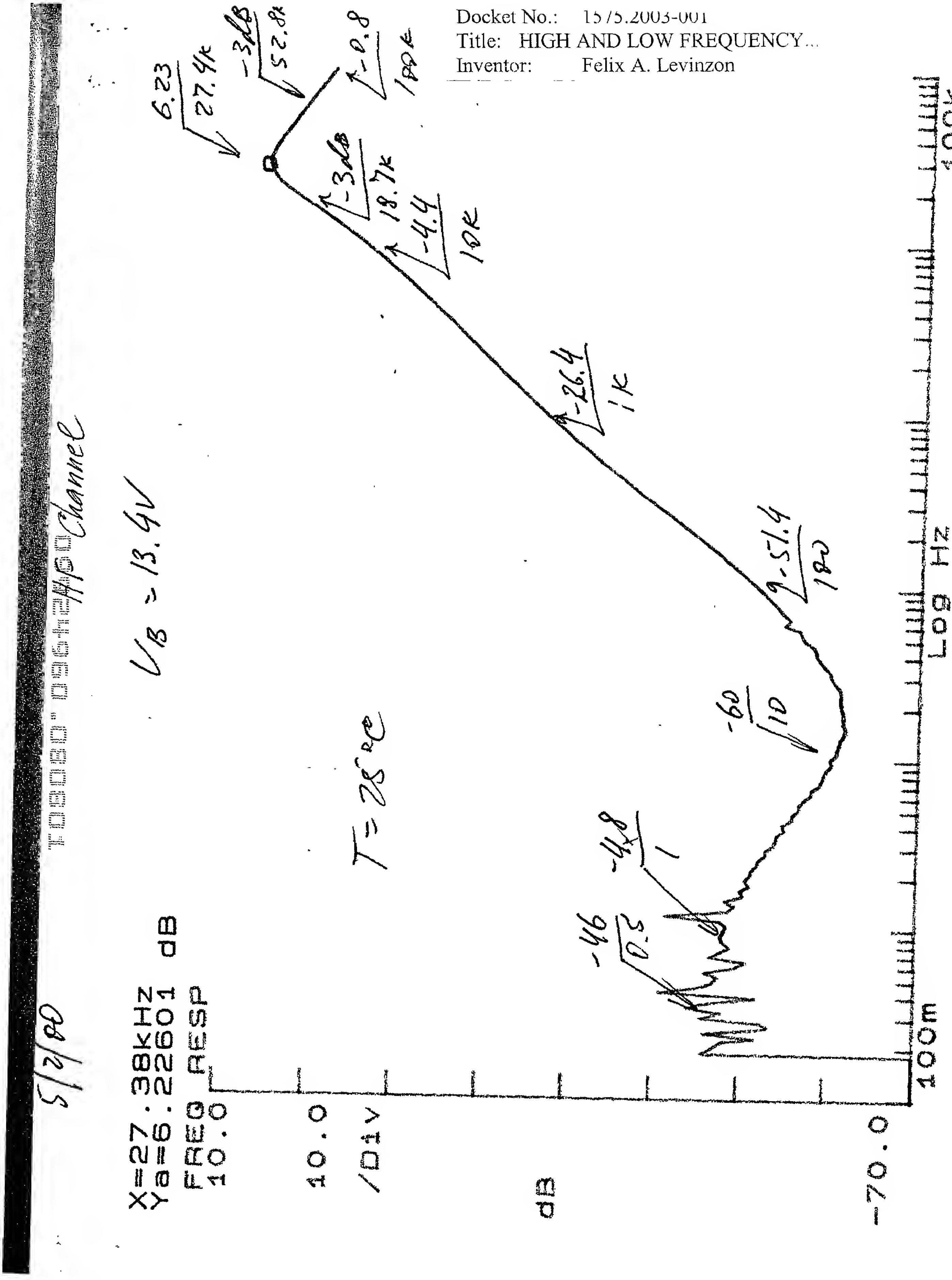
X=27.38kHz
Ya=6.22601 dB
FREQ RESP
10.0 dB
10.0
/DIV
dB
-70.0
100m
Log Hz
100K

Fig. 4

5/2/00

[redacted] Channel

$V_B = 11.1V$

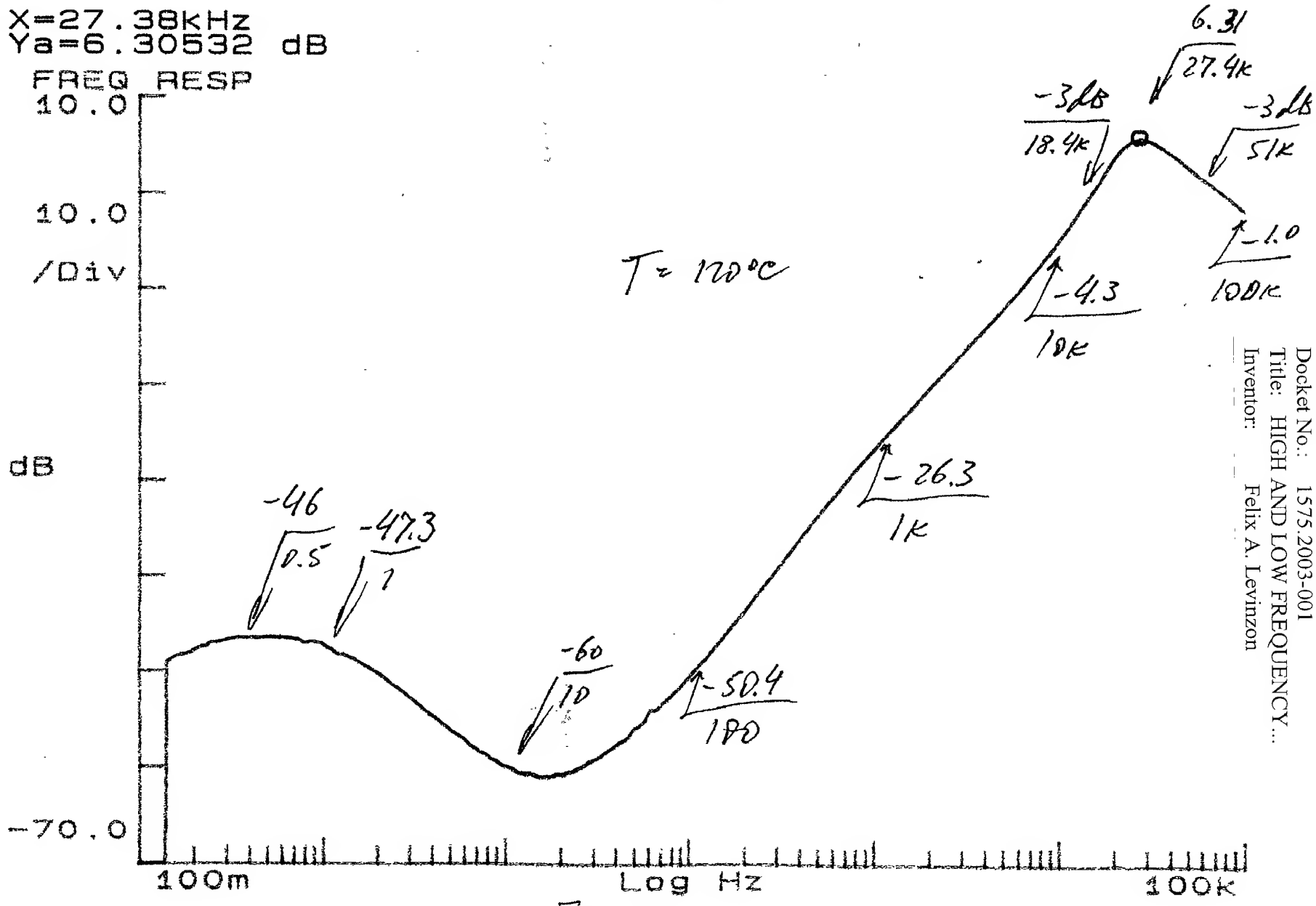

Fig. 5

Docket No.: 1575.2003-001
Title: HIGH AND LOW FREQUENCY...
Inventor: Felix A. Levinzon

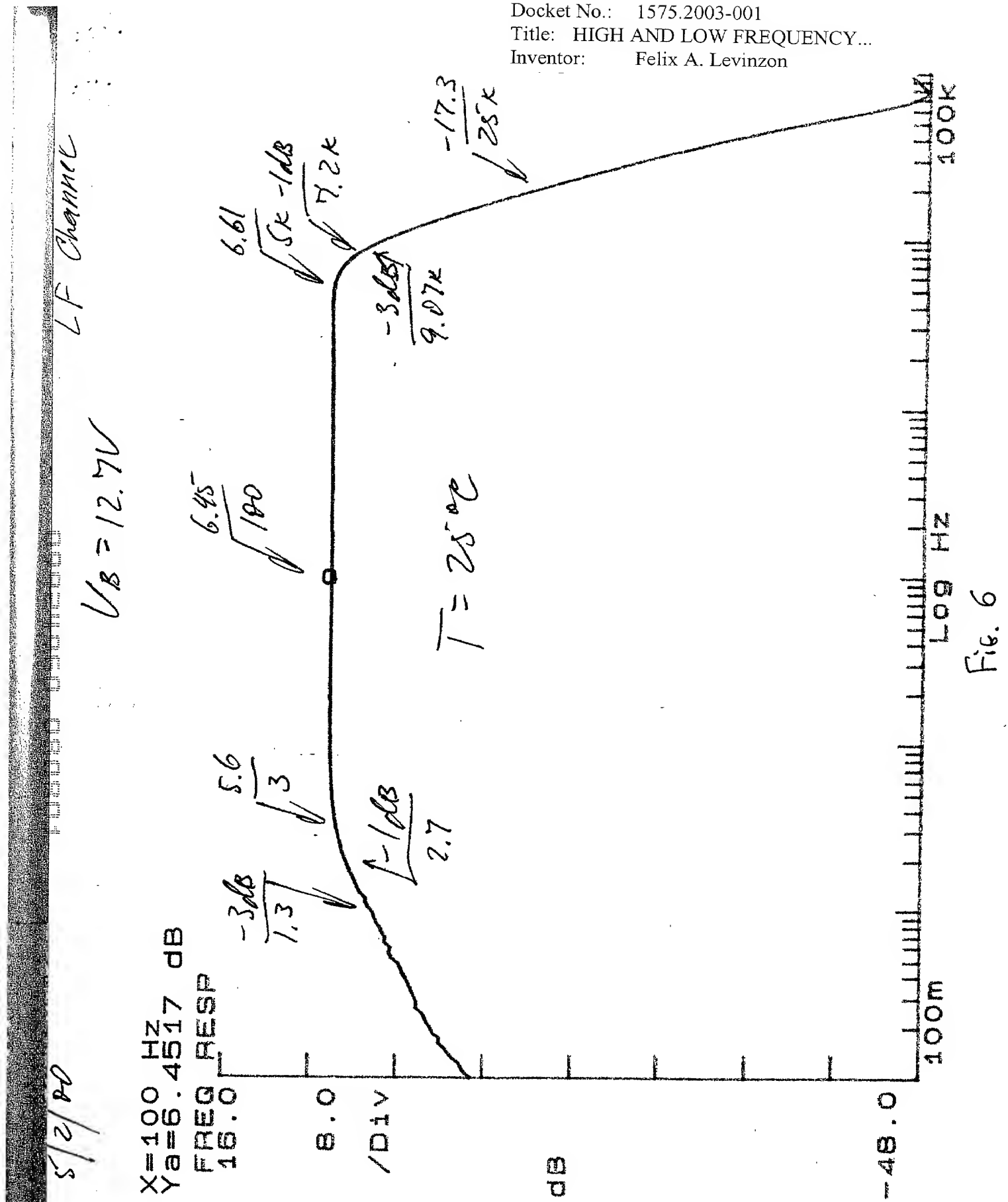
LF Channe
V_B = 12.7V
T = 25°C
X=100 Hz
Ya=6.4517 dB
FREQ RESP
16.0
8.0
/Div
dB
-48.0
100m
Log Hz
100K
-3dB / 1.3
5.6 / 3
-1dB / 2.7
6.45 / 180
6.61 / 5K -1dB / 7.2K
-3dB / 9.07K
-17.3 / 25K

Fig. 6

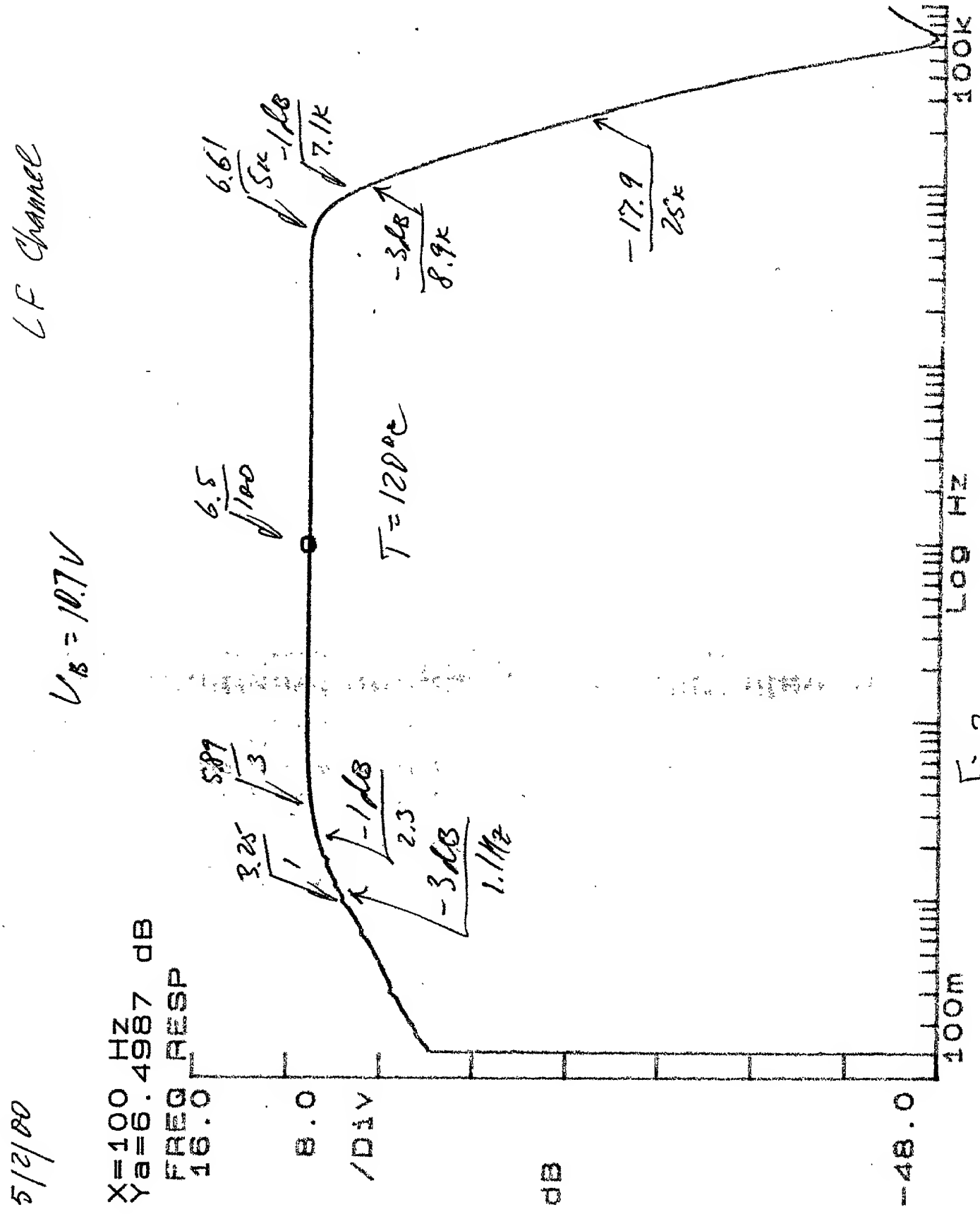
LF Channel
V_B = 10.7V
T = 120°C
6.5 / 100
6.61 / 5K -1dB / 7.1K
-3dB / 8.9K
-17.9 / 25K
5.89 / 3
3.25 / 1
-1dB / 2.3
-3dB / 1.1Hz
100m
100K
Log Hz
dB
8.0 / Div
-48.0
X=100 Hz
Ya=6.4987 dB
FREQ RESP
16.0
5/2/80

Fig. 7

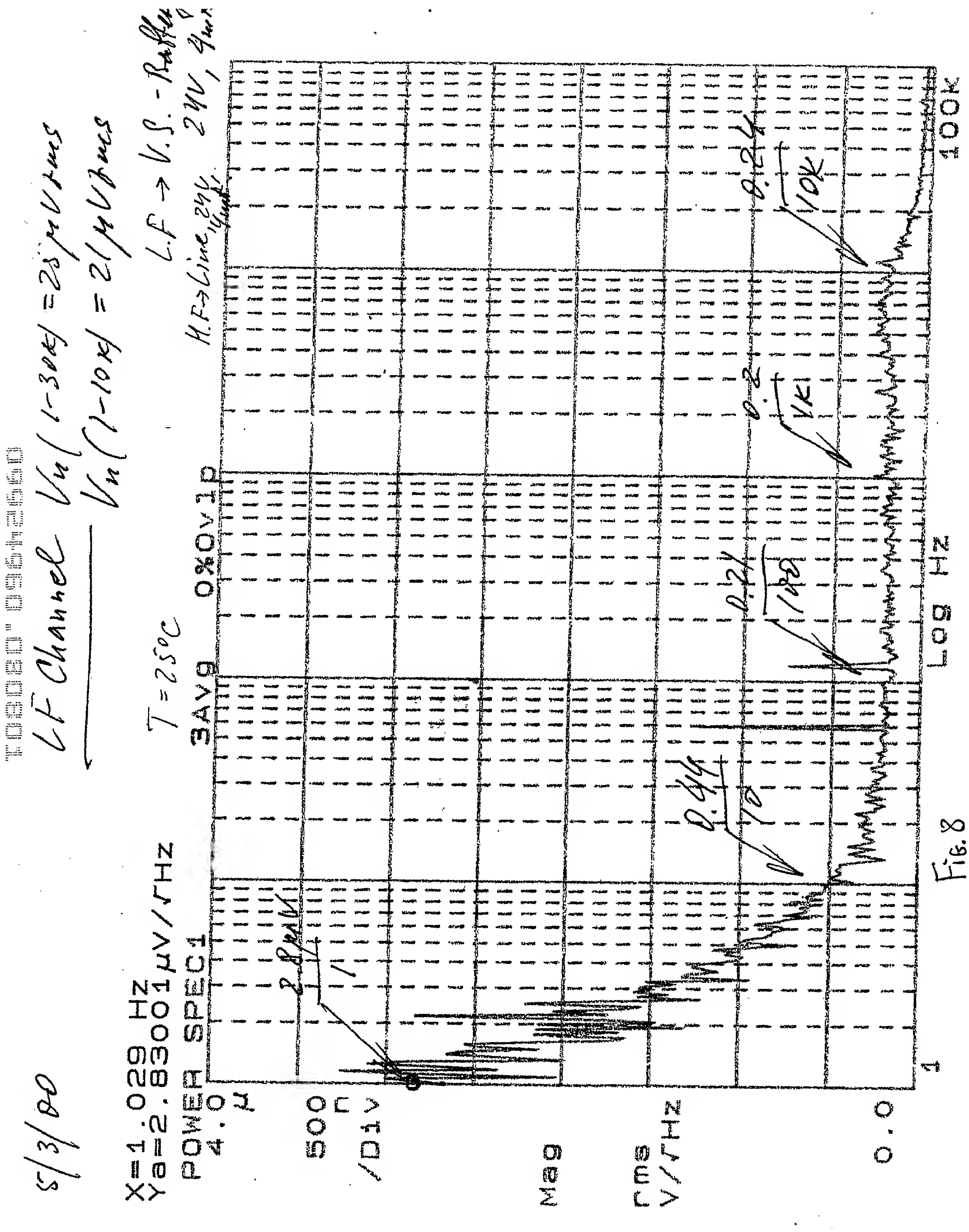
X=1.029 Hz
Ya=2.83001 µV/√Hz
POWER SPEC1
4.0 µ
500 n
/Div
Mag
rms
V/√Hz
0.0
3AVG
0%Ov1P
1
Log Hz
100K
LF Channel
T=25°C

Fig. 8

5/3/00

$V_n(1\text{-}30k) = 15\,\mu V_{rms}$

$V_n(1\text{-}100k) = 22\,\mu V_{rms}$

HF Channel

L.F. - Battery 24V, 4mA
H.F. - Line, 24V, 4mA

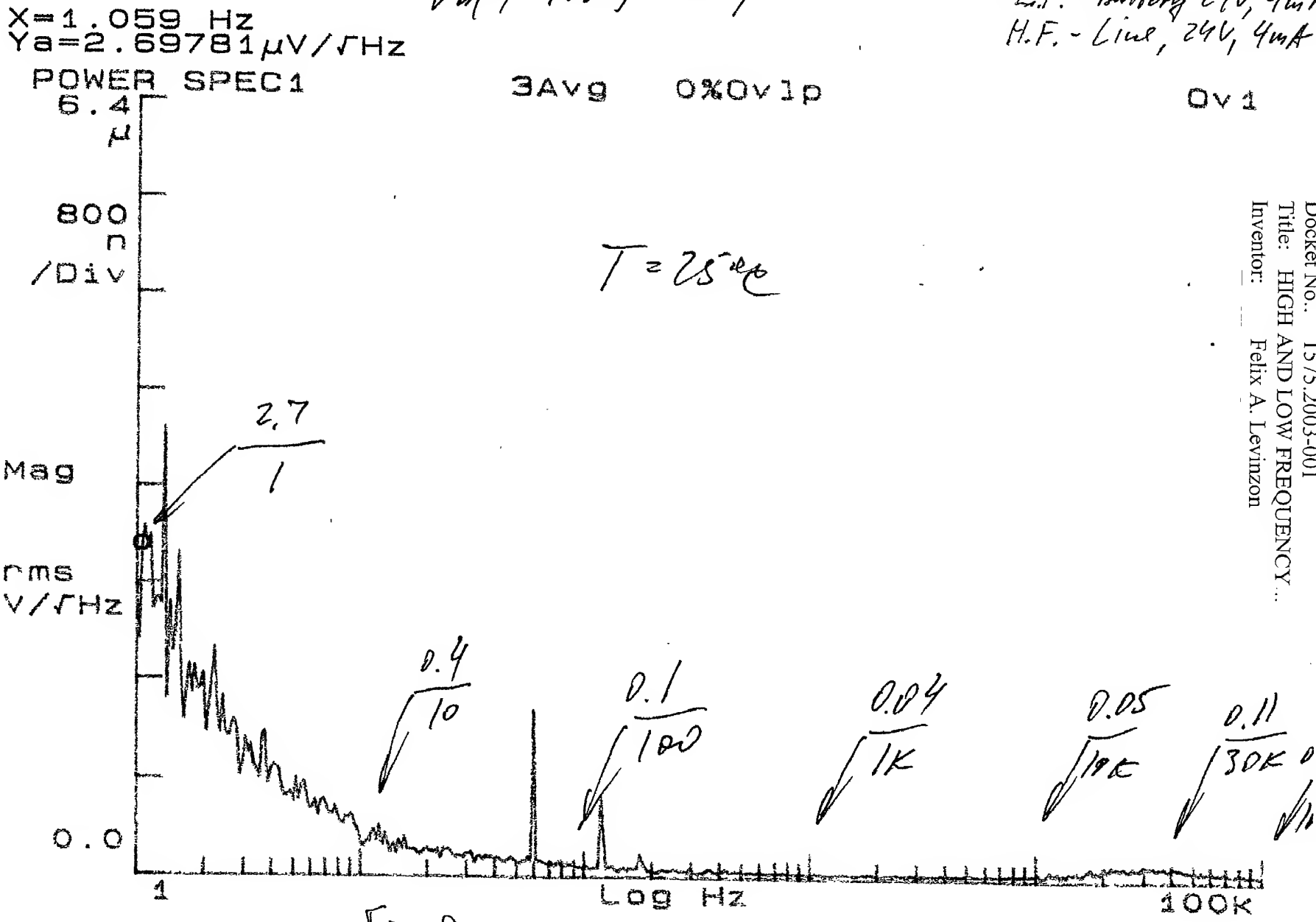

Fig. 9